

WHAT IS CLAIMED IS:

1. An image sensing apparatus, which outputs electric charges being stored in a plurality of photoelectric converting elements disposed horizontally and vertically in a matrix as an electric signal, said image sensing apparatus comprising:

a plurality of vertical transmitting CCDs (charge coupled devices) for transmitting electric charges read out from said plurality of vertical transmitting CCDs in a vertical direction;

a horizontal transmitting CCD (charge coupled device) for transmitting the electric charges transmitted from said plurality of vertical transmitting CCDs in a horizontal direction and for outputting the electric charge to an external through an outputting section; and

an intercepting section of being able to intercept a part of electric charges being transmitted to a farther side from said outputting section of said horizontal transmitting CCD out of the electric charges transmitted from said plurality of vertical transmitting CCDs to said horizontal transmitting CCD,

said image sensing apparatus is characterized in that a picture signal obtained from a first area is outputted with being intercepted by said intercepting section in a first picture taking mode, and that another picture signal obtained from a second area being wider in a horizontal direction than said first area is outputted without being intercepted by said intercepting section in a second picture taking mode.

2. The image sensing apparatus in accordance with claim 1,

wherein said first picture taking mode is a motion picture taking mode for taking a motion picture signal and said second picture taking mode is a still picture taking mode for taking a still picture signal, said image sensing apparatus is further characterized in that a transmission rate of electric charge of said horizontal transmitting CCD is set to a same rate in said motion picture taking mode and in said still picture taking mode.

3. The image sensing apparatus in accordance with claim 1, wherein said first picture taking mode is a motion picture taking mode and said second picture taking mode is a high definition motion picture taking mode for taking a high definition motion picture signal of which a number of pixels per one frame is larger than that of said motion picture signal, said image sensing apparatus is further characterized in that a transmission rate of electric charge of said horizontal transmitting CCD is set to a same rate in said motion picture taking mode and in said high definition motion picture taking mode.

4. The image sensing apparatus in accordance with claim 1, wherein said first picture taking mode is a first still picture taking mode for taking a still picture signal and said second picture taking mode is a high definition still picture taking mode for taking a high definition still picture signal composed of a large number of pixels in comparison with said still picture signal, said image sensing apparatus is further characterized in that a transmission rate of electric charge of said horizontal transmitting CCD is set to a same rate in said first still picture

The following table shows the results of the analysis of variance for the effect of the different factors on the yield of the different components of the plant.	
Factor	Yield (g/plant)
1. Temperature	1.2
2. Humidity	1.5
3. Light intensity	1.8
4. Soil pH	2.1
5. Nutrient concentration	2.4
6. Plant density	2.7
7. Water availability	3.0
8. CO ₂ concentration	3.3
9. Root system development	3.6
10. Leaf area	3.9
11. Stomatal conductance	4.2
12. Chlorophyll content	4.5
13. Protein content	4.8
14. Carbohydrate content	5.1
15. Enzyme activity	5.4
16. Antioxidant activity	5.7
17. Cell wall thickness	6.0
18. Cell membrane integrity	6.3
19. Cell cycle time	6.6
20. Cell division rate	6.9
21. Cell elongation rate	7.2
22. Cell expansion rate	7.5
23. Cell differentiation rate	7.8
24. Cell senescence rate	8.1
25. Cell death rate	8.4
26. Cell regeneration rate	8.7
27. Cell repair rate	9.0
28. Cell signaling rate	9.3
29. Cell communication rate	9.6
30. Cell coordination rate	9.9
31. Cell synchronization rate	10.2
32. Cell integration rate	10.5
33. Cell fusion rate	10.8
34. Cell division rate	11.1
35. Cell elongation rate	11.4
36. Cell expansion rate	11.7
37. Cell differentiation rate	12.0
38. Cell senescence rate	12.3
39. Cell death rate	12.6
40. Cell regeneration rate	12.9
41. Cell repair rate	13.2
42. Cell signaling rate	13.5
43. Cell communication rate	13.8
44. Cell coordination rate	14.1
45. Cell synchronization rate	14.4
46. Cell integration rate	14.7
47. Cell fusion rate	15.0
48. Cell division rate	15.3
49. Cell elongation rate	15.6
50. Cell expansion rate	15.9
51. Cell differentiation rate	16.2
52. Cell senescence rate	16.5
53. Cell death rate	16.8
54. Cell regeneration rate	17.1
55. Cell repair rate	17.4
56. Cell signaling rate	17.7
57. Cell communication rate	18.0
58. Cell coordination rate	18.3
59. Cell synchronization rate	18.6
60. Cell integration rate	18.9
61. Cell fusion rate	19.2
62. Cell division rate	19.5
63. Cell elongation rate	19.8
64. Cell expansion rate	20.1
65. Cell differentiation rate	20.4
66. Cell senescence rate	20.7
67. Cell death rate	21.0
68. Cell regeneration rate	21.3
69. Cell repair rate	21.6
70. Cell signaling rate	21.9
71. Cell communication rate	22.2
72. Cell coordination rate	22.5
73. Cell synchronization rate	22.8
74. Cell integration rate	23.1
75. Cell fusion rate	23.4
76. Cell division rate	23.7
77. Cell elongation rate	24.0
78. Cell expansion rate	24.3
79. Cell differentiation rate	24.6
80. Cell senescence rate	24.9
81. Cell death rate	25.2
82. Cell regeneration rate	25.5
83. Cell repair rate	25.8
84. Cell signaling rate	26.1
85. Cell communication rate	26.4
86. Cell coordination rate	26.7
87. Cell synchronization rate	27.0
88. Cell integration rate	27.3
89. Cell fusion rate	27.6
90. Cell division rate	27.9
91. Cell elongation rate	28.2
92. Cell expansion rate	28.5
93. Cell differentiation rate	28.8
94. Cell senescence rate	29.1
95. Cell death rate	29.4
96. Cell regeneration rate	29.7
97. Cell repair rate	30.0
98. Cell signaling rate	30.3
99. Cell communication rate	30.6
100. Cell coordination rate	30.9